



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/975,940	11/21/1997	ALFRED D. COMMINS	SST/816	1225

7590 01/23/2009
JAMES R CYPHER
1607 FINANCIAL CENTER BLDG
405 14TH STREET
OAKLAND, CA 94612

EXAMINER

CAJILIG, CHRISTINE T

ART UNIT	PAPER NUMBER
----------	--------------

3633

MAIL DATE	DELIVERY MODE
-----------	---------------

01/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 08/975,940	Applicant(s) COMMINS ET AL.	
	Examiner CHRISTINE T. CAJILIG	Art Unit 3633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 47 is/are allowed.
- 6) ☒ Claim(s) 36-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36, 37, 41, 42, and 44-46 are rejected under 35 U.S.C. 103(a) as being obvious over Mueller (U.S. Patent No. 5,706,626) in view of Horowitz (U. S. Patent No. 3,623,288).

Regarding claim 36, Mueller discloses a wall (Fig. 5) designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component for supporting said wall, said wall comprising: a. a bottom plate (161) for resting on said underlying structural component of said building; c. a plurality of vertically-disposed studs (160a, 160b) resting on said bottom plate; e. a top plate (162) resting on said vertically-disposed studs; g. a shear-resisting assembly (details in Figs. 1 and 2) connected to said top plate (via element 164) and also for connecting to said underlying structural component and for being disposed between said top plate and said underlying structural component, said shear-resisting assembly including, 1. a planar shear-resisting element (110a), said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut (104) connected to said proximal face near said top edge of said shear-resisting element, and disposed

Art Unit: 3633

substantially parallel to said top plate of said wall, 3. a bottom strut (106) connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord (115, 120) connected to said proximal face near said first side edge of said shear-resisting element, 5. a second chord (115, 120) connected to said proximal face near said second side edge of said shear-resisting element, and 6. screws (124) for connecting said top strut, said bottom strut, and said first chord and said second chord to said shear resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element; h. top plate fasteners (152), having a threaded shank portion, for connecting said shear-resisting assembly to said top plate of said wall; and i. one or more foundation anchors (166a) for connecting said shear-resisting assembly to said underlying structural component of said building.

Mueller does not disclose that the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly are made of wood; b. a foundation anchor for connecting said bottom plate to said underlying structural component of said building; d. nails for connecting said plurality of vertically-disposed studs to said bottom plate; and f. nails for connecting said top plate to said vertically-disposed studs; and 6. nails for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element.

However, it is old and well known in the art that structural components of a building are connected together via nails to create a sturdy, unified structure and to use wood as a building material. Nonetheless, Horowitz discloses a wall with a foundation

Art Unit: 3633

anchor (62) for connecting a bottom plate to an underlying structural component of said building; nails for connecting horizontal and vertical framing members together (Col 5, Ln 34-40) to hold all of the framing members securely in a permanent connection. Mueller also discloses that it is old and well known that wooden members may be used in fabricating a shear wall assembly (Col 1, Ln 34-55).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Mueller to have a foundation anchor for connecting said bottom plate to said underlying structural component of said building; nails for connecting all horizontal and vertical framing members together as taught by Horowitz to provide stable permanent connections and to make the shear wall members out of wood as further taught by Mueller to provide a relatively inexpensive material. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use wood for the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claim 37, Mueller discloses a wall (Fig. 5) designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component for supporting said wall, said wall comprising: a. a bottom plate (161) for resting on said underlying structural component of said building; c. a plurality of vertically-disposed studs (160a, 160b) resting on said bottom plate; e. a top plate

Art Unit: 3633

(162) resting on said vertically-disposed studs; g. a shear-resisting assembly (details in Figs. 1 and 2) connected to said top plate (via element 164) and also for connecting to said underlying structural component and for being disposed between said top plate and said underlying structural component, said shear-resisting assembly including, 1. a planar shear-resisting element (110a), said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut (104) connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall, 3. a bottom strut (106) connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord (115, 120) connected to said proximal face near said first side edge of said shear-resisting element, 5. a second chord (115, 120) connected to said proximal face near said second side edge of said shear-resisting element, and 6. means (124) for connecting said top strut, said bottom strut, and said first chord and said second chord to said shear resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element; h. means (connecting plate 164) for connecting said shear-resisting assembly to said top plate of said wall; and i. a foundation anchor (166a, 166b) for connecting said shear-resisting assembly to said underlying structural component of said building, said foundation anchor being designed to transmit lateral forces imposed on said underlying structural component to said shear-resisting assembly, and wherein said bottom strut (106) is formed with an opening through which said foundation anchor passes, and said opening

Art Unit: 3633

(through which bolt 166 is inserted) in said bottom strut is a notch in said bottom strut that allows said bottom strut to slide into place.

Mueller does not disclose that the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly are made of wood; b. means for connecting said bottom plate to said underlying structural component of said building; d. means for connecting said plurality of vertically-disposed studs to said bottom plate; and f. means for connecting said top plate to said vertically-disposed studs.

However, it is old and well known in the art that structural components of a building are connected together via known fasteners to create a sturdy, unified structure and to use wood as a building material. Nonetheless, Horowitz discloses a wall with a means which is a foundation anchor (62) for connecting a bottom plate to an underlying structural component of said building and fasteners for connecting horizontal and vertical framing members together (Col 5, Ln 34-40) to hold all of the framing members securely in a permanent connection. Mueller also discloses that it is old and well known that wooden members may be used in fabricating a shear wall assembly (Col 1, Ln 34-55).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Mueller to have a means for connecting said bottom plate to said underlying structural component of said building and fastening means for connecting all horizontal and vertical framing members together as taught by Horowitz to provide stable permanent connections and to make the shear wall members out of wood as further taught by Mueller to provide a relatively

Art Unit: 3633

inexpensive material. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use wood for the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claim 41, Mueller discloses a wall (Fig. 5) designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component for supporting said wall, said wall comprising: a. a bottom plate (161) for resting on said underlying structural component of said building; c. a plurality of vertically-disposed studs (160a, 160b) resting on said bottom plate; e. a top plate (162) resting on said vertically-disposed studs; g. a shear-resisting assembly (details in Figs. 1 and 2) connected to said top plate (via element 164) and also for connecting to said underlying structural component and for being disposed between said top plate and said underlying structural component, said shear-resisting assembly including, 1. a planar shear-resisting element (110a), said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut (104) connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall, 3. a bottom strut (106) connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord (115, 120) connected to said proximal face near said first side edge of said shear-

Art Unit: 3633

resisting element, 5. a second chord (115, 120) connected to said proximal face near said second side edge of said shear-resisting element, and 6. means (124) for connecting said top strut, said bottom strut, and said first chord and said second chord to said shear resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element; h. means (connecting plate 164) for connecting said shear-resisting assembly to said top plate of said wall; i. means (172) for connecting said shear-resisting assembly to said underlying structural component of said building; j. first and second anchor bolts (166a, 166b) for anchoring to said underlying structural component and are disposed near said first and second chords; k. first and second holdowns (130a, 130b) that receive said first and second anchor bolts; l. nuts (135) that are fitted on said first and second anchor bolts and engage said first and second holdowns; m. holdown fasteners (132), having a threaded shank portion, for connecting said first and second holdowns to said first and second chords, and wherein; n. said bottom strut (106) is formed with anchor bolt openings (through which 166 goes through) through which said first and second anchor bolts pass.

Mueller does not disclose that the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly are made of wood; b. means for connecting said bottom plate to said underlying structural component of said building; d. means for connecting said plurality of vertically-disposed studs to said bottom plate; and f. means for connecting said top plate to said vertically-disposed studs.

However, it is old and well known in the art that structural components of a building are connected together via known fasteners to create a sturdy, unified structure and to use wood as a building material. Nonetheless, Horowitz discloses a wall with a means which is a foundation anchor (62) for connecting a bottom plate to an underlying structural component of said building and fasteners for connecting horizontal and vertical framing members together (Col 5, Ln 34-40) to hold all of the framing members securely in a permanent connection. Mueller also discloses that it is old and well known that wooden members may be used in fabricating a shear wall assembly (Col 1, Ln 34-55).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Mueller to have a means for connecting said bottom plate to said underlying structural component of said building and fastening means for connecting all horizontal and vertical framing members together as taught by Horowitz to provide stable permanent connections and to make the shear wall members out of wood as further taught by Mueller to provide a relatively inexpensive material. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use wood for the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claim 42, Mueller already modified by Horowitz discloses the structure discussed above, but does not disclose that the threaded holdown fasteners are inserted only a selected distance into the first and second chords without passing all the way through the first and second chords. It would have been obvious design choice to have the threaded holdown fasteners inserted a selected distance into the first and second chords without passing all the way through the first and second chords since applicants have not disclosed that inserting the holdown fasteners through the first and second chords solves any stated problem and it appears that the structure would perform equally well if the holdown fastener inserted a selected distance into the first and second chords.

Regarding claim 44, Mueller discloses a wall (Fig. 5) designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component for supporting said wall, said wall comprising: a. a bottom plate (161) for resting on said underlying structural component of said building; c. a plurality of vertically-disposed studs (160a, 160b) resting on said bottom plate; e. a top plate (162) resting on said vertically-disposed studs; g. a shear-resisting assembly (details in Figs. 1 and 2) connected to said top plate (via element 164) and also for connecting to said underlying structural component and for being disposed between said top plate and said underlying structural component, said shear-resisting assembly including, 1. a planar shear-resisting element (110a), said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut (104) connected to

Art Unit: 3633

said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall, 3. a bottom strut (106) connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord (115, 120) connected to said proximal face near said first side edge of said shear-resisting element, 5. a second chord (115, 120) connected to said proximal face near said second side edge of said shear-resisting element, and 6. means (124) for connecting said top strut, said bottom strut, and said first chord and said second chord to said shear resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element; h. means (connecting plate 164) for connecting said shear-resisting assembly to said top plate of said wall; i. means (172) for connecting said shear-resisting assembly to said underlying structural component of said building.

Mueller does not disclose that the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly are made of wood; b. means for connecting said bottom plate to said underlying structural component of said building; d. means for connecting said plurality of vertically-disposed studs to said bottom plate; f. means for connecting said top plate to said vertically-disposed studs nor that each of said first and second chords of said shear-resisting assembly are formed from two elongated wood members, laminated together.

However, it is old and well known in the art that structural components of a building are connected together via known fasteners to create a sturdy, unified structure and to use wood as a building material. Nonetheless, Horowitz discloses a wall with a

Art Unit: 3633

means which is a foundation anchor (62) for connecting a bottom plate to an underlying structural component of said building and fasteners for connecting horizontal and vertical framing members together (Col 5, Ln 34-40) to hold all of the framing members securely in a permanent connection. Mueller also discloses that it is old and well known that wooden members may be used in fabricating a shear wall assembly (Col 1, Ln 34-55).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Mueller to have a means for connecting said bottom plate to said underlying structural component of said building and fastening means for connecting all horizontal and vertical framing members together as taught by Horowitz to provide stable permanent connections and to make the shear wall members out of wood as further taught by Mueller to provide a relatively inexpensive material. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use wood for the planar element, top and bottom struts of the shear resisting assembly and to make the first and second chords of said shear-resisting assembly formed from two elongated wood members, laminated together, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claim 45, Mueller discloses a wall (Fig. 5) designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component for supporting said wall, said wall comprising: a. a bottom plate

Art Unit: 3633

(161) for resting on said underlying structural component of said building; c. a plurality of vertically-disposed studs (160a, 160b) resting on said bottom plate; e. a top plate (162) resting on said vertically-disposed studs; g. a shear-resisting assembly (details in Figs. 1 and 2) connected to said top plate (via element 164) and also for connecting to said underlying structural component and for being disposed between said top plate and said underlying structural component, said shear-resisting assembly including, 1. a planar shear-resisting element (110a), said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut (104) connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall, 3. a bottom strut (106) connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord (115, 120) connected to said proximal face near said first side edge of said shear-resisting element, 5. a second chord (115, 120) connected to said proximal face near said second side edge of said shear-resisting element, and 6. means (124) for connecting said top strut, said bottom strut, and said first chord and said second chord to said shear resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element; h. means (connecting plate 164) for connecting said shear-resisting assembly to said top plate of said wall; i. means (172) for connecting said shear-resisting assembly to said underlying structural component of said building.

Mueller does not disclose that the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly are made of wood; b. means for connecting said bottom plate to said underlying structural component of said building; d. means for connecting said plurality of vertically-disposed studs to said bottom plate; and f. means for connecting said top plate to said vertically-disposed studs.

However, it is old and well known in the art that structural components of a building are connected together via known fasteners to create a sturdy, unified structure and to use wood as a building material. Nonetheless, Horowitz discloses a wall with a means which is a foundation anchor (62) for connecting a bottom plate to an underlying structural component of said building and fasteners for connecting horizontal and vertical framing members together (Col 5, Ln 34-40) to hold all of the framing members securely in a permanent connection. Mueller also discloses that it is old and well known that wooden members may be used in fabricating a shear wall assembly (Col 1, Ln 34-55).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Mueller to have a means for connecting said bottom plate to said underlying structural component of said building and fastening means for connecting all horizontal and vertical framing members together as taught by Horowitz to provide stable permanent connections and to make the shear wall members out of wood as further taught by Mueller to provide a relatively inexpensive material. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use wood for the planar element, top and bottom

Art Unit: 3633

struts, and the first and second chords of the shear resisting assembly, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claim 46, Mueller already modified by Horowitz discloses the structure discussed above and further discloses that said shear-resisting assembly further comprises: a. intermediate studs (140) disposed between said top and bottom struts of said shear-resisting element; b. means for connecting said intermediate studs to said top and bottom struts (via 114); c. means for connecting said intermediate studs to said structural panels; and wherein selected intermediate studs are disposed at said joints of said structural panels, serving to connect said structural panels together (via 115 and 124).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller (U.S. Patent No. 5,706,626) in view of Horowitz (U. S. Patent No. 3,623,288) as applied to claim 37 above, and further in view of Haydon (U. S. Patent No. 5,279,088).

Regarding claim 38, Mueller already modified by Horowitz discloses the structure discussed above, but does not disclose epoxy within said opening in said bottom strut to ensure close contact between said foundation anchor and said bottom strut.

Haydon discloses filling an opening with epoxy (Col 7, Ln 56-60) to further secure an anchor in the opening.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the Applicant's invention to modify the structure of Mueller already modified by Horowitz to have epoxy within an opening, such as that one in said bottom strut to ensure close contact between said foundation anchor and said bottom strut as taught by Haydon to provide additional stability to the anchor and wall connection.

Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being obvious over Mueller (U.S. Patent No. 5,706,626) in view of Horowitz (U. S. Patent No. 3,623,288) and Hardy (U.S. Patent No. 6,148,583).

Regarding claim 39, Mueller discloses a wall (Fig. 5) designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component for supporting said wall, said wall comprising: a. a bottom plate (161) for resting on said underlying structural component of said building; c. a plurality of vertically-disposed studs (160a, 160b) resting on said bottom plate; e. a top plate (162) resting on said vertically-disposed studs; g. a shear-resisting assembly (details in Figs. 1 and 2) connected to said top plate (via element 164) and also for connecting to said underlying structural component and for being disposed between said top plate and said underlying structural component, said shear-resisting assembly including, 1. a planar shear-resisting element (110a), said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut (104) connected to said proximal face near said top edge of said shear-resisting element, and disposed

Art Unit: 3633

substantially parallel to said top plate of said wall, 3. a bottom strut (106) connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord (115, 120) connected to said proximal face near said first side edge of said shear-resisting element, 5. a second chord (115, 120) connected to said proximal face near said second side edge of said shear-resisting element, and 6. means (124) for connecting said top strut, said bottom strut, and said first chord and said second chord to said shear resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element; h. means (connecting plate 164) for connecting said shear-resisting assembly to said top plate of said wall; i. Means (172) for connecting said shear-resisting assembly to said underlying structural component of said building; j. first and second anchor bolts (166a, 166b) for anchoring to said underlying structural component and are disposed near said first and second chords; k. first and second holdowns (130a, 130b) that receive said first and second anchor bolts; l. Nuts (135) that are fitted on said first and second anchor bolts and engage said first and second holdowns; m. means (132) for connecting said first and second holdowns to said first and second chords, and wherein; n. said bottom strut (106) is formed with anchor bolt openings (through which 166 goes through) through which said first and second anchor bolts pass, said anchor bolt openings in said bottom strut being notches in said bottom strut that allow said bottom strut to slide into place.

Mueller does not disclose that the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly are made of wood; b. means for connecting said bottom plate to said underlying structural component of said building; d.

Art Unit: 3633

means for connecting said plurality of vertically-disposed studs to said bottom plate; f. means for connecting said top plate to said vertically-disposed studs nor that said anchor bolt openings are oversized to accommodate mis-installation of said first and second anchor bolts in said underlying structural component.

However, it is old and well known in the art that structural components of a building are connected together via known fasteners to create a sturdy, unified structure and to use wood as a building material. Nonetheless, Horowitz discloses a wall with a means which is a foundation anchor (62) for connecting a bottom plate to an underlying structural component of said building and fasteners for connecting horizontal and vertical framing members together (Col 5, Ln 34-40) to hold all of the framing members securely in a permanent connection. Mueller also discloses that it is old and well known that wooden members may be used in fabricating a shear wall assembly (Col 1, Ln 34-55).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Mueller to have a means for connecting said bottom plate to said underlying structural component of said building and fastening means for connecting all horizontal and vertical framing members together as taught by Horowitz to provide stable permanent connections. Furthermore, Hardy discloses a wall assembly wherein anchor bolt openings (56) are oversized to accommodate adjustment during installation (Col 4, Ln 44-58). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the Applicant's invention to modify the structure of Mueller to have anchor bolt openings that are

Art Unit: 3633

oversized to accommodate mis-installation of said first and second anchor bolts in said underlying structural component as taught by Hardy to allow for adjustment during installation and to make the shear wall members out of wood as further taught by Mueller to provide a relatively inexpensive material. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use wood for the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claim 40, Mueller already modified by Horowitz and Hardy discloses the structure discussed above and further discloses that said first and second holdowns are formed with openings (133) that are oriented in the same direction as, and are in general alignment with, said notches in said bottom strut, when said first and second holdowns are attached to said first and second chords (via 132), said openings receiving said first and second anchor bolts (166a, 166b); and b. said first and second holdowns are formed with portals (channel openings) to allow said shear-resisting assembly to be slid into place, but does not disclose that openings in the first and second holdowns are slotted.

Hardy discloses a wall assembly wherein anchor bolt openings (56) are slotted to accommodate adjustment during installation (Col 4, Ln 44-58).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the Applicant's invention to modify the structure of Mueller already modified by Horowitz and Hardy to have anchor bolt openings as taught by Hardy that are slotted to accommodate mis-installation of said first and second anchor bolts in said underlying structural component to allow for adjustment during installation.

Claim 43 is rejected under 35 U.S.C. 103(a) as being obvious over Mueller (U.S. Patent No. 5,706,626) in view of Horowitz (U. S. Patent No. 3,623,288), Utzman (U.S. Patent No. 5,870,870) and Yoshiyuki (JP 60-122420).

Regarding claim 43, Mueller discloses a wall (Fig. 5) designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component for supporting said wall, said wall comprising: a. a bottom plate (161) for resting on said underlying structural component of said building; c. a plurality of vertically-disposed studs (160a, 160b) resting on said bottom plate; e. a top plate (162) resting on said vertically-disposed studs; and further discloses that a shear panel can be positioned within the wall between the top, bottom, and vertical studs with a plate means (164) for connecting a shear-resisting assembly to said top plate of said wall; and anchoring means (130a, 130b, 166a, 166b) for connecting said shear-resisting assembly to said underlying structural component of said building.

Mueller does not disclose that the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly are made of wood; b. means for connecting said bottom plate to said underlying structural component of said building; d.

Art Unit: 3633

means for connecting said plurality of vertically-disposed studs to said bottom plate; f. means for connecting said top plate to said vertically-disposed studs and a shear-resisting assembly connected to said top plate and also for connecting to said underlying structural component and for being disposed between said top plate and said underlying structural component, said shear-resisting assembly including, 1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall, 3. a bottom strut connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord connected to said proximal face near said first side edge of said shear-resisting element, 5. a second chord connected to said proximal face near said second side edge of said shear-resisting element, and 6. edge fasteners, having shank portions, for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element; and j. boundary edging members disposed on said shear-resisting element at said top and bottom edges and said first and second side edges that are pierced by said shank portions of said edge fasteners and thereby strengthen the connection made by said edge fasteners, and wherein said boundary edging members are u-shaped channels, having a pair of legs joined by a central

Art Unit: 3633

member that embrace said shear-resisting element, each of said edge fasteners passing through each of said legs of said u-shaped channels.

However, it is old and well known in the art that structural components of a building are connected together via known fasteners to create a sturdy, unified structure and to use wood as a building material. Nonetheless, Horowitz discloses a wall with a means which is a foundation anchor (62) for connecting a bottom plate to an underlying structural component of said building and fasteners for connecting horizontal and vertical framing members together (Col 5, Ln 34-40) to hold all of the framing members securely in a permanent connection. Mueller also discloses that it is old and well known that wooden members may be used in fabricating a shear wall assembly (Col 1, Ln 34-55).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Mueller to have a means for connecting said bottom plate to said underlying structural component of said building and fastening means for connecting all horizontal and vertical framing members together as taught by Horowitz to provide stable permanent connections and to make the shear wall members out of wood as further taught by Mueller to provide a relatively inexpensive material. Moreover, it would have been obvious to one having ordinary skill in the art at the time of invention to use wood for the planar element, top and bottom struts, and the first and second chords of the shear resisting assembly, since it has been held to be within the general skill of a worker in the art to select a known material

Art Unit: 3633

on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Moreover, Utzman discloses a shear-resisting assembly for use in framed buildings wherein the shear-resisting assembly includes 1. a planar shear-resisting element (10), said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including, 2. a top strut (upper horizontal member) connected to said proximal face near said top edge of said shear-resisting element, 3. a bottom strut (lower horizontal member) connected to said proximal face near said bottom edge of said shear-resisting element, 4. a first chord (3) connected to said proximal face near said first side edge of said shear-resisting element, 5. a second chord (3) connected to said proximal face near said second side edge of said shear-resisting element, and 6. edge fasteners (1), having shank portions (8), for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element, said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element.

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to substitute a shear panel assembly as taught by Utzman into the wall frame of Mueller to provide a shear panel with improved resistance to tensile and compressive loading.

Finally, Yoshiyuki discloses wall with a boundary edging member (7) disposed on a shear-resisting element (4) on places that are pierced by shank portions of an edge

Art Unit: 3633

fastener (6) and thereby strengthen the connection made by said edge fasteners, and wherein said boundary edging members are u-shaped channels, having a pair of legs (7a, 7b) joined by a central member (7) that embrace said shear-resisting element, said edge fastener passing through each of said legs of said u-shaped channels to prevent damage from forming in the areas of the fastener. Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the Applicant's invention to modify the structure of Utzman to have boundary edging members disposed on said shear-resisting element on all areas edges (i.e. at said top and bottom edges and said first and second side edges) that are pierced by said shank portions of said edge fasteners and thereby strengthen the connection made by said edge fasteners, and wherein said boundary edging members are u-shaped channels, having a pair of legs joined by a central member that embrace said shear-resisting element, each of said edge fasteners passing through each of said legs of said u-shaped channels as taught by Yoshiyuki to provide reinforcement at the fastener locations.

Allowable Subject Matter

Claim 47 is allowed.

Response to Arguments

Applicant's arguments with respect to claims 36-46 have been considered but are moot in view of the new ground(s) of rejection. Despite the added limitation to make the shear assembly to be made of wood and assembled with nails, such a modification

Art Unit: 3633

would have been obvious in view of prior art. See rejection above. Moreover, all the claimed elements are known in the prior art and one skilled in the art would have combined the elements as claimed by known methods with no change to their respective functions, and the combination would have yielded predictable results to one having ordinary skill in the art of being able to use a more readily available, and relatively inexpensive material.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE T. CAJILIG whose telephone number is (571)272-8143. The examiner can normally be reached on Monday - Thursday from 8am - 4pm.

Art Unit: 3633

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Canfield can be reached on (571) 272-6840. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. T. C./
Examiner, Art Unit 3633

/Robert J Canfield/
Supervisory Patent Examiner, Art Unit 3635